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EVA SMITH

A ROGUE RIVER EXCURSION YIELDS A CHINOOK SALMON AND TAKES THE STING OUT OF HIGH MEAT PRICES FOR THESE OREGON HOUSEWIVES (Bulletin No. 2)

Bulletin No. 1, November 15, 1948

Unrest Hits Bolivia, the American Tibet

BOLIVIA joined Paraguay, Panama, and other centers of Latin-American unrest when its president recently proclaimed a nation-wide state of siege and expelled a number of insurgents. These and other preventive actions were taken to avoid a more serious outbreak in the landlocked South American country.

A land of remote highlands and nearly trackless jungle flats, Bolivia is little known and seldom visited even by its neighbors from adjoining Brazil, Paraguay, Argentina, Chile, and Peru. Until World War II, there was still less of common interest between this "American Tibet" and the United States.

Population Lives "High"

In 1941, however, Bolivia joined the lend-lease nations and began shipping the bulk of its foremost export—tin ore—to the United States. This action revived Bolivia's tin-mining industry (illustration, inside cover), helped the Allied war effort by providing the tin no longer available from Jap-held Malaya, and strengthened New World economic ties by diverting Bolivia's tin trade from its old customer, England.

Not even in Tibet does the main body of people live at so high a level. The concentration is in the Altiplano (high plateau), a lofty basin between two main Andes ridges. On Bolivia's boundary at the Altiplano's northern end is Lake Titicaca, 12,500 feet above sea level, highest big lake in the world.

Native Indians, "with bellows for lungs," work the tin ore at levels of 13,000 feet and more, where other people gasp with the effort of walking. More than half of Bolivia's people are pure-blooded Indians (illustration, next page), the highest proportion in South America. One-third are *mestizos*, of mixed white and Indian blood. The small remainder are whites, the ruling class since the Spanish conquest.

Gold and silver, which lured the Spaniards to the region four centuries ago, are still mined. Copper, lead, zinc, tungsten, wolfram, antimony, and bismuth round out the list of principal metals.

Plaza Murillo Is Country's Center

Despite the mineral wealth, agriculture is much more important to the average Bolivian. (The tin industry gives employment to only 60,000 workers.) Well established crops are coca (source of cocaine), cotton, corn, coffee, cacao (source of chocolate), sugar cane, rubber, and cinchona.

No other country can claim as high a political center as La Paz, Bolivia's capital, and few can claim one as compact as the Plaza Murillo in that city. Imagine the White House and the Capitol on adjoining sides of a public square in Washington, D. C. Fill out the remaining sides with important government buildings and a cathedral. Lift the whole city onto

ENTERED AS SECOND-CLASS MATTER APRIL 27, 1943, POST OFFICE, WASHINGTON, D. C., UNDER ACT OF MARCH 3, 1879.
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SIEMEL FROM THE URRIOLAGOITIA EXPEDITION

AT NEARLY 15,000 FEET ABOVE SEA LEVEL, HIGHER THAN ANY POINT IN THE UNITED STATES, BOLIVIANS MINE TIN

These mills of the Llallagua mines at Catavi process the tin ore that Indian workers bring up from 100 miles of tunnels and shafts. Bolivia (Bulletin No. 1) is the world's second-ranking tin producer. About half the government's income is derived from taxes on the mining industry.

Bulletin No. 2, November 15, 1948

Law and Order Reached Oregon 100 Years Ago

THE Pacific Northwest, Paul Bunyan land of tall trees, giant dams, big fish (illustration, cover), and cloud-scratching mountains, has this year put on view its natural and man-made wonders with special pride to celebrate a centennial.

This "last frontier" is a land of superlatives. Oregon's Coos Bay leads all ports in timber export. Washington's Grand Coulee Dam bulks as the largest structure ever built by man. Idaho's Grand Canyon of the Snake River is the deepest gorge in North America.

Wagons Brought Settlers and Laws

But in the march of democratic institutions around the world the great Northwest is important as the place where organized United States government first reached the Pacific Ocean.

This happened 100 years ago—only 72 years after the signing of the Declaration of Independence. On August 14, 1848, President James Polk created Oregon Territory, a mammoth province from which the states of Oregon (illustration, next page), Idaho, and parts of Montana and Wyoming were later carved.

Orderly government reached the Oregon country by wagon. Hardly had serious-minded farmers and ranchers whipped tired oxen over the last mile of the Oregon Trail before they had set up a provisional government at Champoeg, near Portland, Oregon, in 1843. In one jump they projected the nation's frontier 2,000 miles westward.

The Oregon country, at that time stretching from California to Alaska, was under joint British-United States rule. In 1846 the straight line separating the United States and Canada was extended to the Pacific, giving America sole title to the south, and Great Britain to the north. Settlers poured into Oregon and spread up and down the coastal valleys. An Oregonian in neighboring California discovered gold and started the human stampede of the forty-niners.

Six-month Trip for First Territorial Governor

While Congress argued over admitting California as a free or a slave state and while local vigilante committees provided "necktie parties" as California's only approach to law and order, Oregon was serenely governing itself under its territorial enabling act. For a while, however, Oregon Territory was practically a manless region, for all able-bodied males were south in the goldfields.

Early travel difficulties caused complications. President Polk appointed Joseph Lane of Indiana first governor of Oregon. After a six-month trip, he reached Oregon City on March 2, 1849, in time to serve one day of his term—for on March 4 Zachary Taylor became president.

However, Lane acted as governor until Taylor found a replacement. The man the new president wanted was an Illinois lawyer named Abraham Lincoln. The rail splitter was tempted and his friends urged him to accept. But Mrs. Lincoln emphatically said no!

A war scare that turned out to be comic opera with a happy ending

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a lofty plateau, cupped in by peaks higher than the highest in the United States, and you have La Paz.

This Bolivian metropolis, whose name means "peace," has 287,000 residents. It nestles in a cuplike depression of the Altiplano more than two miles above the sea. Illimani, 21,184 feet, climaxes the background.

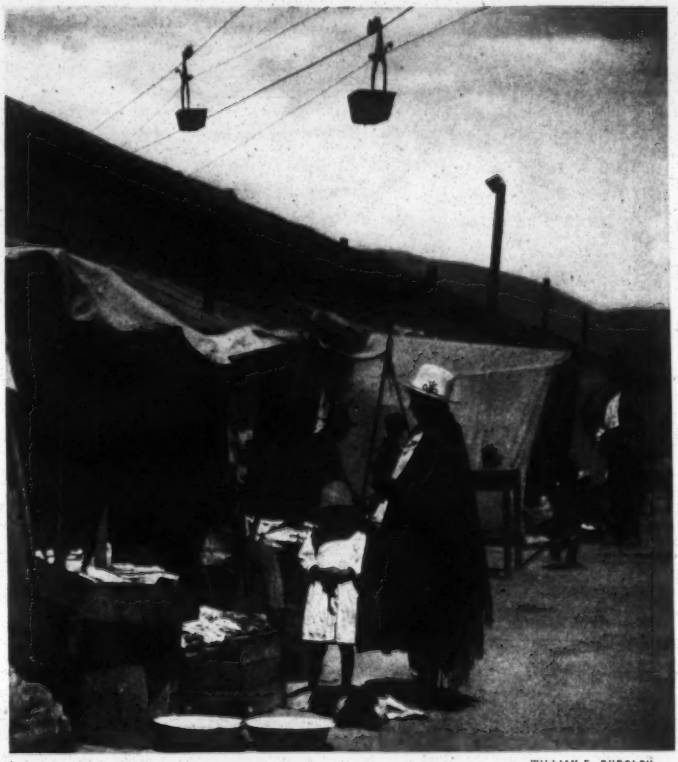
Sucre is nominally Bolivia's capital, but the Supreme Court is the only arm of government remaining in that city of 31,000. An altitude of "only" 9,300 feet gives Sucre a pleasanter climate than La Paz.

Third-largest South American country, Bolivia covers an area almost twice that of Texas. In its vast northeast, reaching to Amazon headwaters, are tropical lowlands (*yungas*) larger than the Lone Star State. But four-fifths of its 3,500,000 people live at altitudes above 10,000 feet. It ranks seventh among the ten South American republics in population.

NOTE: Bolivia is shown on the National Geographic Society's map of South America. Write the Society's headquarters, Washington 6, D.C., for a price list of maps.

For further information, see "Bolivia—Tin Roof of the Andes," in the *National Geographic Magazine* for March, 1943*; and "Bolivia, Land of Fiestas," November, 1934. *(Issues marked with an asterisk are included on a special list of Magazines available to teachers in packets of ten for $1.00.)*

See also, in the GEOGRAPHIC SCHOOL BULLETINS, October 22, 1945, "Bolivia, at South America's Top, Is a Top Tin Producer."



WILLIAM E. RUDOLPH

BUCKETS OF TIN ORE RIDING OVERHEAD ARE A FAMILIAR SIGHT FOR THIS INDIAN MOTHER AND CHILD IN CATAVI'S SHOPPING CENTER

Gaza Is Key Arab Town in Negeb Strife

GAZA, the southern Palestine town often described as a key to the Arab-Jewish tug-of-war over the Negeb, still holds the strategic spot that has brought it fame and trouble since Old Testament times.

One of the five strongholds of the Philistines, the sun-baked city lay across the ancient caravan and invasion route that linked Arabia with the Mediterranean, and Babylonia and Syria with Egypt. On the fertile coastal plain between the blue Mediterranean and inland seas of sand, it was called "port of the desert."

Named Arab Capital

The city's early name, Aza, means "the strong" in Hebrew. There, blinded Samson, strong man of the Bible, was imprisoned, giving rise to Milton's line, "Eyeless, in Gaza, in the mill with slaves." Samson's revenge was to pull down the pillars of the temple, destroying himself and his Philistine enemies gathered there.

Amid olive groves, fruit orchards, and vegetable gardens, Gaza rises today on a hill about three miles from its Mediterranean port section. It is entirely an Arab settlement. It was recently proclaimed the provisional capital of a new Arab state. This state, if recognized, would include the Negeb, the inland desert reaches of southern Palestine, which was assigned to Israel by the original United Nations partition, but recommended for Arab control by the more recent Bernadotte plan.

North and south of Gaza stretches the narrow strip of southwest Palestine which was one of the pieces assigned to the Arabs in the patchwork design of the proposed United Nations partition and which the Bernadotte plan also leaves in Arab hands.

With a population of 30,000, Gaza in recent years has been an important gateway to southern Palestine. It normally is an active center for commercial and local industry. In its bazaars, desert Bedouins and other traders from far and near buy and sell wheat, olives, figs, dates, almonds, cloth, weapons, and pottery.

Has Had Up-and-down Career

Despite its many activities, the Gaza of today has 10,000 fewer inhabitants than it had in 1914 and is much smaller than the busy Jewish ports of Tel Aviv and Haifa to the north. It figures far less in sea trade than it did in ancient times when it was renowned as the home of a light, filmy cloth. This material became known as gauze—after Gaza.

Through the centuries, this Mediterranean city has had an up-and-down career of destruction and rebuilding. Around it surged Biblical struggles between the Philistines and the Israelites. Alexander the Great captured Gaza more than 300 years before Christ. The Moslem conquest engulfed it. It was a prize during the Crusades, and again in 1799, when Napoleon took it. A base of German-Turkish operations in World War I, it was almost demolished by British bombardments.

Near the city is a modern airport which was a stop on the British air service to India. By it run Palestine's coastal railroad and paralleling

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bobbed up in the territory's history in 1859. It still was not clear at that time where the offshore international line should run among the many islands and channels of the Puget Sound waters between Canada's Vancouver Island and what is now the State of Washington. The San Juan Islands were especial bones of contention, being claimed by both Britain and the United States and settled by citizens of both countries.

International frictions on San Juan, most important island of the group, exploded when an American farmer killed the pig of a Hudson's Bay official with a shot heard all the way to London and Washington.

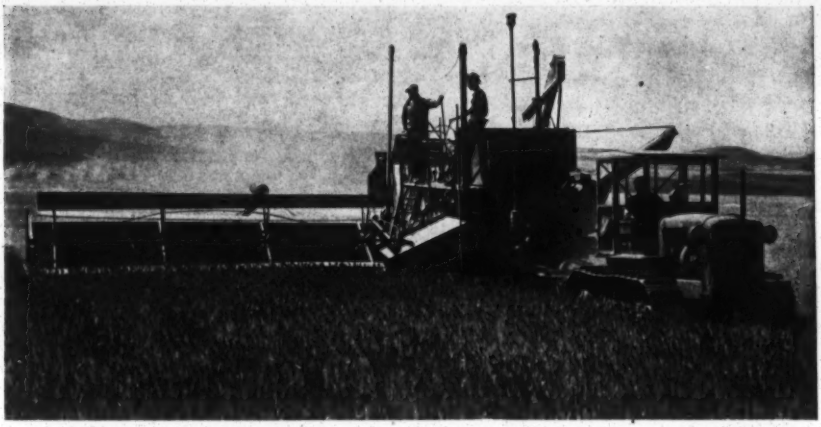
According to the British, the pig was an imported animal of great value. To the Americans, it was an incorrigible uprooter of farmers' gardens and a nuisance. When no settlement appeared possible, and the Hudson's Bay Company was threatening to ship the involved American to Vancouver for trial, the Americans asked for military protection.

Soon a United States force arrived at San Juan under the command of George E. Pickett, later to lead the stirring Confederate charge at Gettysburg. The British dispatched ships with marines, who set up camp at the other side of the island. There was talk of war.

Calmer judgment called for a joint occupation of the island. Fraternization softened the feeling between the two military groups and this occupation lasted until 1872, when the islands were placed on the United States side through arbitration by Germany's Emperor Wilhelm I. The following year the San Juan isles were organized into a county of Washington Territory, and they became the last bit of territory to be officially added to continental United States.

NOTE: Oregon is shown on the Society's Map of Northwestern United States.

See also, "Oregon Finds New Riches," in the *National Geographic Magazine* for December, 1946; "Wartime in the Pacific Northwest," October, 1942; "The Columbia Turns on the Power," June, 1941; and "A Native Son's Rambles in Oregon," February, 1934; and, in the GEOGRAPHIC SCHOOL BULLETINS, February 17, 1947, see "Crater Lake, Blue Water on a Mountaintop."



RAY ATKESON

WHEAT FOR THE BISCUITS OF DIXIE IS HARVESTED ON THE PLAINS OF OREGON

The Beaver State produces both hard and soft wheat. Much of the latter is shipped through the Panama Canal to the southeastern states where it is prized in biscuit making. This farm being combined lies on the Columbian Plateau, in north-central Oregon.

Bulletin No. 4, November 15, 1948

National Geographic Figures in Science News

"WE have found the curlew's nest."

"We have made photographs, with rocket-borne cameras, at altitudes so high that the pictures show the curvature of the earth."

These two recent statements, representing almost opposite ends of scientific endeavor, were of immediate concern at National Geographic Society headquarters in Washington, D. C. The first was wired to Dr. Gilbert Grosvenor, President of the Society, by Dr. Arthur A. Allen, who had just solved an ornithological mystery of 163 years by finding the Alaska nesting place of the bristle-thighed curlew.

The second statement was released when United States Navy rockets successfully photographed 1,100,000 square miles of the West from above the White Sands (New Mexico) Proving Grounds. It recalled the fact that the National Geographic Society, 18 years ago, was responsible for taking the first photograph showing the curvature of the earth (illustration, next page).

Bristle-thighed Curlew Commutes from Equator to Alaska

The bristle-thighed curlew is so called because of the lengthened shafts of some of its flank feathers which project from its sides like bristles or stiff hairs. The adult bird is between 16 and 18 inches long, with variegated brown plumage and a long, curved bill. It has a very short whistling call, and it feeds mostly on mollusks, crustaceans, and other shore-flats life.

This member of the curlew family is a long-range commuter. Its habitat, most of the year, is the Pacific islands in latitudes as far south as southern Peru and northern Chile. Each spring it wings thousands of miles northward to the remote fastnesses of rugged Alaska to nest and raise its brood. Only when the young are full grown—usually some time in August—does the family depart from its sub-Arctic hideout to return to semitropical isles north and south of the Equator.

The bird was first identified in Tahiti in 1785, but it was more than three-quarters of a century later when scientists got their first clue that the bristle-thighed curlew summered in Alaska for breeding purposes. The first specimen was taken on the coast of Alaska in 1869. Numerous others have been observed since then, but, until Dr. Allen's find, they were always near the shoreline, far from their nests.

Dr. Allen, professor of ornithology at Cornell University, accompanied by his son, David Allen, also of Ithaca, New York, and two Alaskan naturalists, Warren Peterson and Henry Kyllingstad, flew inland from a coastal base to mountain lakes and above-timberline areas which the Alaskans suspected as the curlew's breeding place. Finally, near Mountain Village, the party found and photographed the birds on their nests.

The bristle-thighed curlew was the only North American bird whose breeding grounds and fledglings had never previously been found. The National Geographic Society, Cornell University, and the Arctic Institute of North America were co-sponsors of the wholly successful expedition.

NOTE: Regions where the bristle-thighed curlew nests may be located on the Society's map of Canada, Alaska, & Greenland.

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highway (illustration, below). These arteries tie in with desert roads on which fighting developed as Israeli forces sought to keep communications open to their Negeb settlements.

Negeb means dry or parched land. Water and more water is the goal of the few hundred pioneering Jews who have been farming in this southern third of Palestine for five years.

To some settlers, the Negeb, sparsely occupied by a few thousand Bedouin nomads, was completely forbidding. Others, visualizing extensive Jewish colonization, saw that water is the key to reclaiming this region which in pre-Christian times had supported 200,000 or more people.

Backing their faith with their lives, the colonists have set up a score of desert farm communities and have produced some crops even when summer drought forced the Bedouins and their flocks north to the hills.

Jewish Agency surveys of some 900 square miles of the Negeb show that the desert soil is comparable to that of the plains of Texas and needs only a reliable dry-season water supply. Reservoirs, locks, and short pipelines are the present weapons of the battle with the desert.

A "Jordan Valley Authority" has been proposed for making the Negeb verdant. This calls for piping fresh water from the upper Jordan south to the Negeb, and for pouring Mediterranean water through mountain tunnels to the Dead Sea to replace the diverted Jordan supply.

NOTE: Gaza is shown on the Society's map of Bible Lands and the Cradle of Western Civilization.

For additional information, see "Change Comes to Bible Lands," in the *National Geographic Magazine* for December, 1938; and in the GEOGRAPHIC SCHOOL BULLETINS, October 18, 1948, see "New Palestine Plan Would Alter Borders."

W. ROBERT MOORE

JEWISH VOLUNTEER ROADBUILDERS PAUSE WHILE AN ARAB CAMEL CARAVAN PASSES

The workers, including one woman in shorts, have been dumping basketfuls of ground stone onto the patch of wet asphalt. In the background are buildings and gardens of a Jewish communal settlement on the road between Gaza and Jaffa.

Atomic Center Modernizes Ancient Harwell

ENGLAND'S recently revealed atomic research center at Harwell has introduced an ultra-modern note into a region steeped in centuries of history and tradition.

Harwell lies in a peaceful, sylvan setting on the northern slopes of the Berkshire Downs, about ten miles south of Oxford. Few villages could offer a stranger, less appropriate background for the working of atomic scientists than this ancient hamlet.

Peaceful Background for a War-born Science

Skipped by guidebook writers for the more conspicuous attractions of such neighbors as Abingdon, Didcot, and Wantage, left off the average map, ignored by encyclopedias, Harwell for centuries led the most sheltered of lives. The development of atomic science brought it front-page fame. Its chief distinction was its ancient cross-shaped church, built more than 700 years ago.

Around the new blank walls that house the complex machinery of the atomic plant spreads a peaceful countryside. Thatched cottages, old manor houses, time-worn inns, and venerable bridges dot the land. Berkshire's pleasant green country of river and meadow, pine woods and gently rolling downland, is rich in the history and legend of England's past.

At Wantage, six miles to the west of Harwell, Alfred the Great was born in 849. Rudyard Kipling, in *Puck of Pook's Hill*, weaves tales of the legendary characters who lived on the downs in Roman times.

Not far from Harwell's tree-shaded lanes and modest cottages, the Thames winds between wooded banks. A few miles to the southeast the river cuts a gorge through the chalk range of the downs.

Four or five miles south of Harwell the prehistoric Ridgeway follows the crest of the downs. This grass-grown trackway is believed to have been built before the Romans came to Britain. Its surface is too rutted and bumpy for vehicles but it gives to hikers a dramatic panorama of the lovely Vale of the White Horse.

Abingdon Abbey Sacked by Danes

Two of Harwell's oldest neighbors, Abingdon and Wallingford, turned a cold shoulder to the railroad when it first came their way. Later, when this startling mode of transportation had become an accepted thing, branch lines were extended to these conservative towns.

Abingdon, on the Thames north of Harwell, was the site of a powerful abbey from which the Benedictine system spread throughout England. It was founded in 675. In the ninth century, during the reign of Alfred the Great, the Danes sacked the abbey. Later it was rebuilt.

The town retains an air of antiquity, although little is left of the abbey except the gateway. Buildings which contribute to the atmosphere of age include the 14th century Old Grammar School, the Prior's House and the Guest House, and the old churches of St. Nicholas and St. Helen (illustration, next page).

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ALBERT W. STEVENS

THE FIRST PHOTOGRAPH EVER MADE SHOWING LATERALLY THE CURVATURE OF THE EARTH

This amazing picture, taken from a plane 21,000 feet above sea level near Villa Mercedes, Argentina (foreground), shows a slightly curved horizon line of the snow-covered Andes Range, 287 miles away. It was made in the course of an air survey of the Andes for the National Geographic Society in 1930. Captain Stevens, the photographer, could not see the mountains, but an infrared screen on the lens brought out their image. The horizon represents 1/360 of the earth's circumference. Recent series of photographs taken from rockets show much more of the horizon and thus exhibit more curvature.

The town long ago developed into a small commercial center, noted for the manufacture of cloth, clothing, carpets, beer, and ale.

Abingdon's ancient market rival, downstream Wallingford, also looks back to a romantic era. Its name suggests the significance of its position by a river ford used in turn by Britons, Romans, Saxons, Danes, and Normans. A Wallingford mint struck off coins a thousand years ago. Relics of many reigns and periods have been dug up there.

Huge earth ramparts—unexplained to this day—rim three sides of the town. Relics of the Bronze Age found in the vicinity indicate that they may have been built at that time. The river completes the rectangle.

Only fragments remain of the castle, which was built—or perhaps rebuilt—by a follower of William the Conqueror. It was destroyed in the 17th century, during Cromwell's rule. In the centuries of its history Wallingford Castle sheltered kings and nobles. There in 1153 was signed the Treaty of Wallingford which ended the civil struggles of King Stephen's reign. There Henry II held his first parliament.

NOTE: Berkshire County and towns in the neighborhood of Harwell (but not that little town itself) are shown on the Society's Modern Pilgrim's Map of the British Isles.

JUDGES, LTD., COURTESY OF C. A. TINKER

AT ABINGDON, THE QUIET THAMES MIRRORS THE GRACEFUL SPIRE OF AN OLD CHURCH

Willows fringe the placid waters of the Thames and rushes break its gleaming surface at this curve which reflects the church of St. Helen. The building combines architectural styles of several periods. The three-storied tower is Early English (13th century); the spire, Perpendicular. The interior has undergone a good deal of restoration and is said not to "look its age."

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